

Application No. 10/803,994

Supplemental Amendment to Response Filed May 11, 2006.

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-40 (Canceled).

Claim 41 (Previously Presented): An insert for a deposition shield in a plasma processing system comprising:

a plug configured to fit into an opening in said deposition shield, said plug comprises a frontal surface and a perimeter surface;

a flange coupled to said plug and configured to couple said insert to at least one of the deposition shield and a chamber wall of the plasma processing system, said flange comprising a first surface, a second surface, and an edge surface, wherein said first surface comprises:

a mating surface extending inward from said edge surface, and

a recess positioned between said mating surface and said perimeter surface of said plug, said recess having a recess surface recessed from said mating surface; and

a protective barrier provided on a plurality of exposed surfaces of said insert, wherein the plurality of exposed surfaces comprise said frontal surface of said plug, said perimeter surface of said plug, and said first surface of said flange excluding said mating surface.

Claim 42 (Original): The insert as recited in claim 41, wherein said insert comprises a plurality of fastening receptors coupled to said first surface of said flange and said second surface of said flange and configured to receive fastening devices in order to couple said insert to the at least one of the deposition shield and the chamber wall.

Application No. 10/803,994
Supplemental Amendment to Response Filed May 11, 2006.

Claim 43 (Original): The insert as recited in claim 42, wherein each of said plurality of fastening receptors comprises an entrant region, an entrant cavity, an exit through-hole, an interior fastener surface, and a recessed fastener surface.

Claim 44 (Previously Presented): The insert as recited in claim 41, wherein said plurality of exposed surfaces, having said protective barrier thereon, further comprises said recess surface.

Claim 45 (Original): The insert as recited in claim 41, wherein said insert comprises a metal.

Claim 46 (Original): The insert as recited in claim 45, wherein said metal comprises aluminum.

Claim 47 (Original): The insert as recited in claim 41, wherein said insert comprises a rectangular shape.

Claim 48 (Original): The insert as recited in claim 41, wherein said protective barrier comprises Al_2O_3 .

Claim 49 (Original): The insert as recited in claim 41, wherein said protective barrier comprises a mixture of Al_2O_3 and Y_2O_3 .

Application No. 10/803,994

Supplemental Amendment to Response Filed May 11, 2006.

Claim 50 (Currently Amended): The insert as recited in claim 41, wherein said protective barrier comprises a compound containing at least one of a group III element and or a Lanthanum element.

Claim 51 (Previously Presented): The insert as recited in claim 50, wherein said group III element comprises at least one of Yttrium, Scandium, and Lanthanum.

Claim 52 (Original): The insert as recited in claim 50, wherein said Lanthanum element comprises at least one of Cerium, Dysprosium, and Europium.

Claim 53 (Original): The insert as recited in claim 41, wherein said protective barrier comprises at least one of Yttria (Y_2O_3), Sc_2O_3 , Sc_2F_3 , YF_3 , La_2O_3 , CeO_2 , Eu_2O_3 , and DyO_3 .

Claim 54 (Previously Presented): The insert as recited in claim 41, wherein said protective barrier comprises a predetermined thickness and said predetermined thickness is constant across at least one of said exposed surfaces.

Claim 55 (Original): The insert as recited in claim 41, wherein said protective barrier comprises a variable thickness and said variable thickness ranging from 0.5 to 500 microns.

Claim 56 (Currently Amended): The insert as recited in claim ~~[[41]]~~ 43, wherein said plurality of exposed surfaces, having said protective barrier thereon, further comprise said interior fastener surface.

Claims 57-84 (Canceled).

Application No. 10/803,994

Supplemental Amendment to Response Filed May 11, 2006.

Claim 85 (Previously Presented): The insert of claim 41, wherein said protective barrier is provided on at least a portion of said recess.

Claim 86 (Previously Presented): The insert of claim 85, wherein said protective barrier is provided on only a portion of said recess.

Claim 87 (Previously Presented): The insert as recited in claim 41, wherein said recess comprises:

a first sidewall extending from said mating surface to said recess surface, said first sidewall being substantially at right angles to said mating surface and said recess surface; and

a second sidewall opposing said first sidewall and extending from said recess surface to said perimeter surface of said plug, said second sidewall being substantially at a right angle to said recess surface, wherein said second sidewall and said recess have said protective barrier provided thereon.

Claim 88 (Previously Presented): The insert as recited in claim 41, wherein said protective barrier includes a coating which comprises Yttria.

Claim 89 (Previously Presented): The insert as recited in claim 88, wherein said coating is a spray coating.

Claim 90 (Previously Presented): The insert as recited in claim 88, wherein said first sidewall does not include said protective barrier thereon.

Application No. 10/803,994
Supplemental Amendment to Response Filed May 11, 2006.

Claim 91 (Previously Presented): The insert as recited in claim 41, wherein:
said mating surface is a bare metal surface not having said protective barrier thereon
and not having an anodized layer thereon; and
said insert further comprises at least one surface having an anodized layer thereon.

Claim 92 (Previously Presented): The insert as recited in claim 41, wherein said
protective barrier is provided in direct contact with a bare surface of said insert not having an
anodization layer thereon.

Claims 93-95 (Canceled)